

## **Abstract**

### **Introduction**

Tissue Viability education has been an important feature of the preregistration nursing programmes at the University of Salford since 2011. After approval of the Future Nurse Curriculum in 2019, a small team of staff developed a 'Getting Wound Care Right' week (GWCRW) for the Fundamentals of Integrated Nursing Practice Module. This week provides intensive teaching to second year students from across all fields of practice on a range of wound care related topics and clinical skills training.

### **Methods**

To evaluate the week of intensive teaching, students who had participated in all the activities were approached via email six months post-delivery and asked if they wished to contribute a 250-word reflection to develop a case series. The aim of the reflections were to understand the impact of the week on students' knowledge, skills and confidence in caring for patients with wounds and whether it sparked their interest to carry out further learning.

### **Results**

From the four students who responded, their reflections on the introduction of the week into their pre-registration studies were overwhelmingly positive. They describe the knowledge gained which included advancement of their anatomy and physiology of the skin and wound healing, evidence-based assessment, treatment and management of wounds, and the impact of wounds on the quality of life of patients. Skills that developed from participating in the week including the categorisation of wounds, wound assessment and pressure redistribution when seated. Whilst impact on clinical practice focused on the importance of multidisciplinary working within wound care, seating provision for pressure ulcer prevention and management and appropriate dressing selection were also noted. Negative comments

related to improvements in clinical practice rather than indications that the GWCRW week format is ineffective or inappropriate. Limitations of the evaluation are the small number of respondents and lack of other fields of practice feedback.

## **Conclusions**

The findings from the reflections indicate that the GWCRW format is a viable approach to meeting the current Future Nurse Curriculum requirements. The format could be enhanced by a greater emphasis on the relevance of wound care teaching to children and young person's nursing students. GWCRW impacted students' clinical confidence on placements when caring for patients with wounds. Further robust evaluation of GWCRW is needed to confirm the findings of this initial evaluation.

**Competing Interests: None**

**Ethics approval: Not required as a case series with students as co-authors**

**Key words:** Wound care pedagogy, undergraduate, evaluation, teaching, tissue viability

**Key points:** With the advent of the Nursing and Midwifery Council's (NMC, 2018) Future Nurse Standards an opportunity to integrate tissue viability practice into preregistration nursing programmes has arisen. So that all students regardless of their field of practice have access to a structured wound care educational programme. This paper provides an example of a structured week of tissue viability education and Students' reflections of it. So that all students regardless of their field of practice have access to a structured wound care educational programme.

**Reflective questions:**

1. Which NMC proficiencies relate to wound care knowledge and skill development?
2. What methods have already been used to deliver wound care to students on undergraduate nursing programmes?
3. How should teaching be delivered to allow both students and faculty to focus on one area at a time and students leading to a greater degree of enquiry?

**Word count:** 3360 words (excluding abstract and figures)

## **Introduction:**

Tissue Viability education has been an important feature of the preregistration nursing programmes at the University of Salford since 2011. Historically students could opt to undertake a Tissue Viability optional module in the second year of their studies. This module was always oversubscribed and meant that not all students could develop fundamental knowledge and skills of wound care practice. With the advent of the Nursing and Midwifery Council's<sup>1</sup> Future Nurse Standards and development of a new future nurse curricula, an opportunity to integrate tissue viability practice arose, so that all second-year students regardless of their field of practice would have access to a structured wound care educational programme. Using a case series approach the purpose of this article is to evaluate the week of intensive teaching on wound care for undergraduate nursing students and provide recommendations for future iterations.

## **Background**

It is widely recognised that wound care not only spans the life course of the population but the health and social care settings in which people may live, work and access. With rising numbers of people living with a wound or wounds and increasing burden on health and social care resources, research has focused on initiatives that lead to better patient management and product selection to improve outcomes and clinical effectiveness<sup>2</sup>.

Inadequate wound care, variations in practice and overuse/underuse of evidence-based wound management has meant people with wounds experience delayed healing, pain and poor quality of life<sup>3</sup>. To address these issues improvements in tissue viability practice involves the development of knowledge and skills of the practitioners who deliver wound care.

Pre-registration programmes provide opportunities to improve the quality of wound care through innovative curriculum design, allowing academics *'to embed skin integrity and wound management*

*across the theoretical and clinical of the pre-registration curriculum'*<sup>4</sup> (p.10). However, a semi systematic literature review by Welsh<sup>5</sup> found that there were shortfalls in the amount of tissue viability education in current undergraduate programmes and recommended the development of more structured wound care education at pre-registration level.

To address these issues and the NMC<sup>1</sup> Future Nurse Curriculum proficiencies related to wound care (Appendix B, Part 2: Procedures for the planning, provision, and management of person-centred nursing care, 4), a small team of nursing academics at the University of Salford developed a themed week as part of the second-year future nurse curricula called '*Getting Wound Care Right Week*'. As new guidance on wound care educational programmes were developed the week was also found to align to the European Wound Management Associations<sup>6</sup> curriculum for student nurses at level 4 and the National Wound Care Core Capabilities Framework for England (NWCSP<sup>7</sup>).

Historically delivery of the optional tissue viability module was face to face with seminars and lectures, which linked to a practice assessment called principles of asepsis. However, due to the COVID-19 Pandemic, Getting Wound Care Right week (GWCR) was initially to be developed for an online audience. From the literature, wound care courses for undergraduate programmes have already been developed for delivery digitally<sup>8</sup>, face to face<sup>9</sup> and in laboratories<sup>10</sup>. Despite this it was felt by the team that a mixture of lectures and self-directed online activities would be required to promote engagement in the week. This was in order to create safe Covid 19 spaces for learning and different opportunities for student engagement. Students learn theory remotely and then attend university to practice what they learnt during in-person skills sessions with lecturers and then have opportunity for discussions with wound care companies at an exhibition. The face-to-face part of blended learning is then spent actively practicing skills, getting hands-on experience and asking questions on new knowledge learnt<sup>11</sup>. The included teaching on the theoretical and clinical aspects of wound care are illustrated in Table 1.

**Table 1.** GWCR Week teaching contents

Lectures	Clinical teaching
History of tissue viability	Holistic wound assessment
Epidemiology and economics of wound care (UK)	Dressing choice and application
Physiology of wound healing across the life span	Removal of sutures and clips
Factors affecting wound healing	Bandaging
Aetiology of pressure ulcers	Wound cleansing
Aetiology of leg ulcers	<b>Additional self-directed work was encouraged focusing on the following areas for exposure to other fields of practice:</b> <ul style="list-style-type: none"> <li>• Skin tears (Adults)</li> <li>• Moisture associated skin damage (Children and Young People (CYP) &amp; Learning Disability (LD))</li> <li>• Self-harm and iatrogenic wounds (Mental Health (MH))</li> <li>• Perineal trauma, sore nipples and caesarean section wound (Midwifery)</li> </ul>
Aetiology of dermatology related wounds	
Aetiology of the diabetic foot	
Aetiology of acute and surgical wounds (including surgical site infection)	
Aetiology of burns	
Advanced wound therapies	
Research challenges in wound care	

The week commences online with a 30-minute introduction to the NMC<sup>1</sup> standards related to tissue viability practice. The students are asked to carry out a self-assessment of their current knowledge, skills, and attitudes against the standards to develop a SWOT analysis. From the self-identified weaknesses the students then set SMART goals (specific, measurable, achievable, realistic and time

bound)<sup>12</sup> for future placements to gain wound care skills to support the theoretical knowledge delivered during the week. The purpose of which is to integrate practice competencies with theoretical knowledge an essential component to improve outcomes and clinical effectiveness<sup>2</sup>. The team then continued to deliver online a series of six 50-minute lectures on day one and on day two another six 50-minute lectures and one 30-minute lecture on a variety of topics (see table 1). On day three and four, due to large cohort numbers, the nursing students attended face to face clinical skills sessions lasting 3 hours and are also directed to online learning materials and skills videos to engage with. This also includes exposure to wounds seen across other fields of practice (mental health, children and young people, learning disabilities and midwifery). The week culminates with a wound care exhibition and the students submitting a poster they have created from a list of case studies to a Padlet (online bulletin board). The poster includes a wound assessment, care plan, and consideration of other members of the multidisciplinary team that would be involved. The students can be creative and must support their posters with literature.

### **Methods:**

To evaluate the week, students who had participated in all the activities were approached via email six months post-delivery and asked if they wished to contribute a 250-word reflection to develop a case series paper. The aim of a case series is to provide a description of the characteristics and outcomes among a group of individuals who have had exposure to an intervention over a period of time, without a control group or randomisation.<sup>13</sup> The aim of the reflections were to understand the impact of the week on students' knowledge, skills and confidence in caring for patients with wounds and whether it sparked their interest to carry out further learning. As students who submitted reflections would also be asked to co-author the paper, we did not require ethics review.

### **Results:**

From a cohort of 554 students who undertook the study week, 250 students had completed all learning activities. From this only n=4 students responded to the request of a reflection, all who were from the adult field of practice. The summaries below explore the self-reported impact on knowledge, skills and patient care.

*Student Nurse 1 (BSc Adult)*

The week educated students on wound care, treatment options, the physiology of wounds and the processes involved in healing, as well as factors which can impact healing rate and skin integrity. A convention was set up for students on campus which facilitated further learning on the more common approaches and treatments for wounds, including pressure relief systems, topical treatments, and nursing interventions available. Furthermore, the classes and simulated sessions were invaluable in showcasing how intricate and precise we need to be as professionals in supporting healing, how to grade wounds and what to look for to assess if the wound is deteriorating.

In practice, registered staff are unaware of how to care for or grade wounds. This comes at a cost to patients and the NHS due to costs of misusing interventions and hospital readmissions. I can troubleshoot with the MDT to understand why a wound is not healing now, for example, a lack of zinc in the diet. It ignited a passion in me to get wound care right, as there is a huge lack of education on the subject. Annually, the NHS spend £5.3 billion on wound care, compared with obesity at £5billion<sup>14</sup> This is a crisis for the NHS and its patients. Getting wound care right will save lives, and could prevent disability, while helping to save our overstretched NHS. All registered staff should have this knowledge, so they can act fast for treatment, opposed to having to delay treatment waiting for a specialist.

*Student Nurse 2 (BSc Adult)*

I thoroughly enjoyed the wound care week, and I was amazed to find out how few universities provide wound care education. The week opened my eyes to the importance of wound care, and the negative effects it can have on the quality of life for people when not performed properly. I have an interest in pressure area management, so the education provided by the seating company on how to maintain good posture while being seated was crucial. The specialist seating, they provide tilts in a way to redistribute pressure while maintaining correct posture, and although I feel this should be the gold standard in practice, this kind of seating isn't always available on a ward environment. Since meeting them, I've found myself having more awareness around how my patients are seated while out in practice, encouraging them to sit in better designed chairs and change their position more frequently in order to reduce the chance of pressure related injuries. While on placement I've now realised the lack of suitable seating in hospitals and would love to see this be improved on in future practice. I also feel more confident in assessing wounds, noticing the different stages in wound progression and I have a better idea of what dressings should be used at each stage. Overall, I believe that wound care education is key to seeing more evidence-based practice in the future, and it should be provided to all nursing students in order to create better outcomes for patients.



*Student Nurse 3 (BSc Adult)*

The online lectures included in this week were really informative and went into depth about the anatomy of wounds and the physiology of wound healing. I already had basic knowledge and understanding of wounds, as I have completed a placement with the district nurses where I was able to observe and contribute to the management and care of various wounds. The enrichment week enabled me to further understand why we care differently for wounds depending on what grade they are, where they are or what they have been caused by. I now know the factors that affect wound healing and the optimum environment needed for wounds to heal. Out on my community placement I observed pressure dressings and Doppler tests on patients with venous legs ulcers and understood to an extent why these were required for this type of wound but after the enrichment week I now know the anatomical reasons and the evidence base behind this practise. On the last day of the enrichment week, I attended the wound care exhibition where representatives from different wound care companies came in to demonstrate and inform about their products. I found the wound care company representatives particularly helpful, as they fully explained and demonstrated how their different wound dressings worked with the wound to aid in the healing process.

I have experienced nurses on various placements who did not know how to adequately manage wounds and how to select the correct dressings and believe that if all universities offered the teaching included in this module, and included the wound care exhibition, to all pre-registration nurses, the wound care and management on wards would be a lot better than it currently is.

*Student Nurse 4 (BSc Adult)*

The Getting Wound Care Right week was very interactive, engaging and had a perfect balance of theoretical knowledge and practical skills. From epidemiology and economics of wounds to their physiology and aetiology, we had the opportunity to cover a lot of key skills and knowledge that I believe are a vital part of nursing care. Anywhere you work, any set of patients you may be looking after, at one point or another, as a nurse, you will encounter wounds.

I find leg ulcers, in particular, very fascinating! I was thrilled when this was covered in a lecture during this week, I was able to learn so much more about them that I otherwise would not have known until I was already faced with one in practice! I do feel more prepared for my next placement, this week has given me the confidence and curiosity to perform wound care, as well as, to continue developing my clinical knowledge and skills.

It was also very exciting to be able to attend an exhibition, speaking to representatives from various wound care manufacturers was very beneficial. Some products I have used numerous times in practice and did not realise the extent of their purpose, or even exactly how they worked. Knowing this information now, helps me to understand optimal treatments and be able to use their full potential! The experience overall, made me feel like a true professional and it was great to be able to network with other members of the MDT.

**Discussion:**

From the four students who responded, their reflections on the introduction of the week into their pre-registration studies were overwhelmingly positive. They describe the knowledge gained which included advancement of their anatomy and physiology of the skin and wound healing, evidence-based assessment, treatment and management of wounds, and the impact of wounds on the quality of life of patients. Skills that developed from participating in the week including the categorisation of wounds, wound assessment and pressure redistribution when seated. Whilst impact on clinical practice focused on the importance of multidisciplinary working within wound care, seating provision for pressure ulcer prevention and management and appropriate dressing selection were also noted. Negative comments related to improvements in clinical practice rather than indications that the GWCR week format is ineffective or inappropriate.

This suggests that a week-long intensive teaching approach to deliver wound care education to undergraduate nurses is a viable option for wound care pedagogy in this professional group. Allowing reflections six months post-delivery allowed the lecturers who deliver the week to examine the impact of the week beyond the teaching period.

The outcomes indicated by the reflections of the students on GWCR week are of unique relevance in the UK due to nurses being the primary providers of wound care<sup>15</sup>. However as wound care education is recognised as being a global concern, the findings may be of use to other countries. It is evident that to improve poor clinical outcomes associated with wound care, as indicated by recent epidemiological studies in relation to low rates of accurate diagnosis and inconsistent management approaches<sup>15</sup>, more emphasis is required on developing the skills, knowledge, and confidence of nurses. The GWCR week appears to be an effective approach to developing these attributes in undergraduate student nurses and should be explored further to support development the professional nurse workforce to address the

growing burden of wounds in the UK. This is supported by recent enquiry into the use of intense block approaches to pedagogy in higher education which consistently indicate positive student outcomes in relation to attainment and student satisfaction<sup>16 17</sup>. These studies report that intense blocks of teaching allow both students and faculty to focus on one area at a time and students are consequently more likely to approach learning with a greater degree of enquiry rather than dividing their focus on multiple areas of study simultaneously. Further enquiry is needed to evaluate block approaches to teaching in the context of wound care within undergraduate nurse education, such as GWCR week. This may help determine the longer-term impacts of this approach on relevant metrics such as theoretical knowledge acquisition and clinical competence.

### **Limitations**

This teaching evaluation using a case series approach is limited by a lack of responses not only from more students who participated in the week, but from across all fields of practice such as children and young people's (CYP) nursing and mental health (MH) nursing. The GWCR week approach was also only evaluated in one university and with only one cohort of student nurses and participants were from one field of practice. It is therefore unclear how generalisable the findings of this case series may be for other HE settings, which means weak inferences can be made and the high likelihood of bias. In addition, due to the nature of COVID-19 restrictions in place during the delivery of these weeks it is unclear what the true impact of this approach would be in normal circumstances where face-to-face teaching can be provided.

### **Conclusion:**

Overall, the results from this initial evaluation of the GWCR week indicated that the format is a viable approach to meeting the current Future Nurse Curriculum requirements. The lack of response from across different fields of practice limits the impact the week had on CYP and MH students. Attitudes

towards the GWCR week were overwhelmingly positive indicating that the teaching impacted student's clinical confidence on placements when caring for patients with wounds. Robust evaluation of GWCR week is needed however other HE organisations should consider implementing the format to meet NMC curriculum requirements and to allow for wider evaluation of its impact.

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